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Attorney's Docket No.:10559/008001

Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (currently amended): A method of establishing a network connection, the method comprising:

establishing a connection across a first communication network configured to carry that carries an audio signal, wherein the first communication network comprises a calling telephone and a receiving telephone;

encoding a computer network address for a second network different from the first network into an encoded network address and sending the encoded network address across the first network, wherein the second network comprises a calling computer and a receiving computer;

using the network address that is sent over the first network to establish a network connection on the second network;

maintaining the first connection across the first communication network while the second network connection is being established; and

providing encryption capabilities, wherein providing the encryption capabilities comprise encrypting the audio signal using an encryption key; and

verifying that the calling computer is coupled to the calling telephone by sending a signal from the receiving telephone to the calling telephone across the first communication network and sending the signal from the calling computer to the receiving computer across the second network, wherein verifying the calling computer is coupled to the calling telephone comprises:

generating a random number;

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sending the random number to the calling telephone across the first communication network;
receiving an encrypted random number at the receiving computer across the second network;
decrypting the encrypted random number using a public cryptographic key; and
comparing the random number with the decrypted random number.

2. (previously presented): The method of claim 1, further comprising:

transferring a secret key across at least one of the network connections; and

allowing network users to converse across the first communication network while encrypting and decrypting audio signals for each user.

3. (currently amended): ~~A method of establishing a network connection, the method comprising:~~

~~establishing a connection across a first communication network that carries audio signals;~~

~~encoding a computer network address for a second network different from the first network into an encoded network address and sending the encoded network address across the first network;~~ The method of claim 1, where the encoded network address is configured to be encoded using dual tone multi-frequency signals;

~~using the network address that is sent over the first network to establish a network connection on the second network, where the first network comprises a voice telephone network; and~~

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~~providing encryption capabilities, wherein providing the encryption capabilities comprise encrypting the audio signal using an encryption key.~~

4. (currently amended): ~~A method of establishing a network connection, the method comprising:~~
~~establishing a connection across a first communication network that carries audio signals,~~
~~encoding a computer network address for a second network different from the first network into an encoded network address and sending the encoded network address across the first network, The method of claim 1, where the encoded network address is configured to be appended to telephone network signaling data; and~~
~~using the network address that is sent over the first network to establish a network connection on the second network.~~

5. (previously presented): The method of claim 1, wherein the second network comprises an Internet, wherein the computer network address comprises an Internet protocol address.

6. (cancelled)

7. (cancelled)

8. (currently amended): The method of claim 1,
further comprising: ~~A method of establishing a network connection, the method comprising:~~
~~establishing a connection across a first communication network that carries audio signals,~~
~~encoding a computer network address for a second network different from the first network into an encoded network~~

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~~address and sending the encoded network address across the first network;~~

~~using the network address that is sent over the first network to establish a network connection on the second network;~~

receiving a stream of audio signals;

sending the audio signals through the connection across the ~~voice~~ first telephone network prior to using the ~~said~~ network address to establish a network connection; and

sending the audio signals through the connection across the ~~computer~~ second network after ~~said~~ using the ~~said~~ network address to establish a the network connection.

9. (currently amended): The method of claim 1,
wherein the encryption capabilities further comprise: A
~~method of establishing a network connection, the method~~
~~comprising:~~

~~establishing a connection across a first communication network that carries audio signals;~~

~~encoding a computer network address for a second network different from the first network into an encoded network address and sending the encoded network address across the first network;~~

~~using the network address that is sent over the first network to establish a network connection on the second network;~~

receiving a stream of audio signals;

encrypting the audio signals using ~~a first~~ the calling computer that is connected to the second network to form encrypted audio signals; and

sending the encrypted audio signals across the first communication network ~~connection~~.

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~~conversation, the computer program including instructions operable to cause a computer to:~~

~~establish a first connection across a computer network between a first party and a second party;~~

~~transmit an encryption key across the computer network so that both said first and second parties have said encryption key;~~

~~encrypt an audio signal using the encryption key; and transmit the encrypted audio signal across a voice communication network using a second connection between the first party and the second party~~ The method of claim 15, further comprising authenticating the calling computer.

18. (cancelled)

19. (currently amended): The method of claim 20 ~~18~~, further comprising authenticating the calling computer.

20. (currently amended): A method of authenticating a telephone call between a calling telephone and a receiving telephone, the method comprising:

establishing a connection across a voice communication network between the calling telephone and the receiving telephone;

establishing a connection across a computer network between a calling computer and a receiving computer by using a computer network address sent on the voice communication network to establish the connection on the computer network; and

verifying that the calling computer is coupled to the calling telephone by sending a signal from the receiving telephone to the calling telephone across the voice communication network and sending the signal from the calling

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computer to the receiving computer across the computer network
~~The method of claim 18~~, where verifying the caller's calling
computer is coupled to the calling telephone comprises:

- generating a random number;
- sending the random number to the calling
telephone across the voice telephone communication network;
- receiving the an encrypted random number at the
receiving computer across the computer network;
- decrypting the encrypted random number using a
public cryptographic key; and
- comparing the random number with the decrypted
random number.

21. (Currently Amended): The method of claim 20 ~~18~~,
where establishing a connection across a computer network
comprises:

- encoding the computer network address into an encoded
network address;
- sending the encoded network address across the voice
telephone network; and
- receiving a network connection request to establish a
connection across the computer network, where the network
connection request uses the computer network address.

22. (Currently Amended): The method of claim 20 ~~18~~,
where establishing a connection across a computer network
comprises:

- receiving the encoded network address across the voice
telephone network;
- translating the encoded network address to a computer
network address; and

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sending a network connection request to establish a connection across the computer network, where the network connection request uses the computer network address.

23. (currently amended): A method of authenticating a telephone call between a calling telephone and a receiving telephone, the method comprising:

establishing a connection across a voice communication network between a calling telephone and a receiving telephone;

establishing a connection across a computer network between a calling computer and a receiving computer; and

verifying that the receiving computer is coupled to the receiving telephone by sending a signal from the calling telephone to the receiving telephone across the voice communication network and sending the signal from the receiving computer to the calling computer across the computer network, wherein verifying the caller's computer is coupled to the calling telephone comprises generating at least one random number to send to the calling telephone across the voice telephone network and comparing the at least one random number to a random number received at the receiving computer across the computer network.

24 -30. (cancelled)

31. (new) A method of authenticating a telephone call between a calling telephone and a receiving telephone, the method comprising:

establishing a connection across a voice communication network between the calling telephone and the receiving telephone;

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establishing a connection across a computer network between a calling computer and a receiving computer by using a computer network address sent on the voice communication network to establish the connection on the computer network; and

verifying that the calling computer is coupled to the calling telephone, wherein the verifying comprises:

generating a random number;

sending the random number to the calling telephone across the voice communication network;

encrypting the random number at the calling computer;

sending the random number from the calling computer to the receiving computer;

decrypting an encrypted random number sent by the calling computer across the computer network using a public cryptographic key; and

comparing the random number with the decrypted random number to enable the receiving computer to verify that the calling computer is coupled to the calling telephone.

32. (new) A method comprising:

establishing a connection across a voice communication network using a receiving telephone;

establishing a connection across a computer network with a receiving computer by using a computer network address sent on the voice communication network to establish the connection on the computer network; and

sending a signal from the receiving telephone across the voice communication network and sending the signal to the receiving computer across the computer network, wherein the sending comprises:

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generating a random number at the receiving computer;
sending the random number across the voice communication network;
receiving an encrypted random number at the receiving computer across the computer network;
decrypting the encrypted random number using a public cryptographic key; and
comparing the random number with the decrypted random number.